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The effect of sodium dodecylsulfate on the equilibria of copper(II) complexing

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Abstract

The effect of sodium dodecylsulfate (SDS) on copper(II) complexing with iminodiacetic acid (IDA) and ethylenediamine (En) is studied by means of potentiometric titration and NMR relaxation methods with computer data processing. In the Cu(II)-IDA-SDS system, competition between the complexone and surfactant micelles for association with Cu2+ ions is found (logKas Cu = 6.47 ± 0.10). In the case of En, ternary associates with monomeric surfactant anions are found: CuEn(DS)2 (logKas = 5.66 ± 0.06) and CuEn2(DS)2 (logKas = 6.38 ± 0.12).